

PATENT CLAIMS

1. A pressure and temperature reactor vessel comprising
 - a) a central block having a multitude of perforations, wherein said perforations are through-going perforations, or cavities or other form of holes permanently closed at one end,
 - b) cover means, operatively associated with a sealing means, for engagement with said central block to seal the open ends of said perforations forming a multitude of chambers,
 - c) a sealing means, operatively associated with the covers means, to form a pressure tight seal when said cover means is brought into position by a locking means,
 - d) a locking means acting in concert with the cover means to engage the sealing means so as to define a multitude of reaction chambers.
2. A pressure and temperature reactor vessel as claimed in claim 1, wherein said perforations are through-going perforations.
3. A pressure and temperature reactor vessel as claimed in claim 1, wherein said sealing means is wholly or partly constructed of a compressible or deformable material.
4. A pressure and temperature reactor vessel as claimed in claim 1, wherein said central block is wholly or partly constructed of a compressible or deformable material.
5. A pressure and temperature reactor vessel as claimed in claim 1, wherein said sealing means is permanently fixed to the cover means.
6. A pressure and temperature reactor vessel as claimed in claim 1, wherein said cover means, acting in concert with the sealing means, has a multitude of protrusions of spherical shape, form or profile, either in part or wholly, presenting a curved surface towards the openings of the multitude of perforations in the central block.
7. A pressure and temperature reactor vessel as claimed in claim 1, wherein the sealing means consists of spherical shaped bodies or similar shaped components, permanently fixed to the cover means, such that they present a curved surface towards the opening of the multitude of perforations in the central block.
8. A pressure and temperature reactor vessel as claimed in claim 1, wherein the sealing means consists of spherical shaped bodies or similar shaped components, loosely fixed to

the cover means, such that they present a curved surface towards the opening of the multitude of perforations in the central block.

5 9. A pressure and temperature reactor vessel as claimed in claim 1, wherein the sealing means consists of circular disks or other similar circular-shaped components that may be permanently fastened to the cover means.

10 10. A pressure and temperature reactor vessel as claimed in claim 1, wherein the sealing means consists of circular disks or other similar circular-shaped components that may be loosely fastened to the cover means.

15 11. A pressure and temperature reactor vessel as claimed in claim 1, wherein the sealing means consists of a flat plate or membrane, covering all the chambers, that may be permanently fastened to the cover means.

12. A pressure and temperature reactor vessel as claimed in claim 1, wherein the sealing means consists of a flat plate or membrane, covering all the chambers, that may be loosely fastened to the cover means.

20 13. A pressure and temperature reactor vessel as claimed in claim 1, wherein said locking means acts in concert with a single cover means on one surface of the central block to define a multitude of cavities.

25 14. A pressure and temperature reactor vessel as claimed in claim 1, wherein said locking means consists of a plurality of fasteners passing by means of appropriate holes from the upper surface of the upper cover means through the central block through to the lower surface of the lower cover means.

30 15. A pressure and temperature reactor vessel as claimed in claim 1, wherein said cover means is a rigid flat plate.

35 16. A pressure and temperature reactor vessel as claimed in claim 1, wherein said cover means, acting in concert with the sealing means, has a multitude of protruding profiles of dimensions sufficiently larger than the dimensions of the perforations in the central block and of cross sectional shape such that in concert with the sealing means through the action of the locking means, a pressure tight seal is formed over and around each of the multitude of perforations in the central block.

17. A pressure and temperature reactor vessel as claimed in claim 1, wherein said central block, acting in concert with the sealing means, has a multitude of protruding profiles of dimensions sufficiently larger than the dimensions of the perforations and of cross sectional shape such that in concert with the sealing means and through the action of the locking means on the cover means, a pressure tight seal is formed over and around each of the multitude of perforations in the central block.